BEARING FEATURES

PL FACTOR

Each section of a pump or motor should be regarded as a single unit with corresponding power input requirements. The entire input horsepower is fed through the drive shaft, the power delivered to or from the unit is limited by the strength of the shaft. The limit is defined as the “PL” factor. “PL” being the operating pressure in PSI and the “L” the sum of the gear widths in inches.

In multiple units the “PL” must be calculated for each connecting shaft and must include the sum of the gear widths driven by it.

(Each shaft has a unique “PL” factor as can be seen in the table below)
Pressure (PSI) x Total Gear Width (Inches) = PL Factor.

PL FACTOR MUST NOT EXCEED FIGURE SHOWN IN CHART FOR SHAFT TYPE

SHAFT TYPE		SOLID SHAFT & GEAR	LOOSE SHAFT (CONTINENTAL SHAFT)
120/131	SAE “A” Spline	2 600	2 600
	SAE “B” Spline	7 900	5 850
	SAE “B” Key	4 850	4 850
	SAE “BB” Spline	12 150	-
	SAE “BB” Key	7 250	5 850
	SAE “C” Spline	-	5 850
	Connecting Shaft	-	5 850
151	SAE “B” Spline	6 100	6 100
	SAE “B-B” Spline	9 400	-
	SAE “B-B” Key	5 600	5 600
	SAE “C” Spline	12 900	8 500
	SAE “C” Key	10 900	8 500
	Connecting Shaft	-	8 500
176	SAE “C” Single	8 000	8 000
	SAE “C” Tandem	12 500	-
	SAE “C” Key	7 500	7 500
	Connecting Shaft	-	10 000